

**REMARKS**

Claims 1-26, 29-33, 35-37, 39, and 41-45 are pending upon entry of this Amendment D and Response to Office Action. Claims 1-19 were previously withdrawn as directed to a non-elected species. Applicants reserve the right to file one or more divisional applications directed to the non-elected invention.

Applicants have amended claims 20 and 36 to require that the short fibers have a moisture content in the range of from 4 to 16%. Support for the amendments to claims 20 and 36 can be found in the instant specification (as published as US 2007/0266503 A1) at paragraphs [0009], [0018] and [0073]-[0074], as well as in Figure 1, Table 1 and withdrawn claim 7. Claim 39 has been amended to properly depend from claim 36 in view of the previously canceled claim 38. No new subject matter has been added by this Amendment D and Response to Office Action.

**Rejections under 35 U.S.C. §103****A. Claims 20 and 36**

Reconsideration is requested of the rejection of claims 20 and 36 under 35 U.S.C. §103(a) as being unpatentable over Whitfield et al. (U.S. Patent No. 4,432,834) in view of Agyapong et al. (U.S. Patent No. 6,554,814).

Claim 20, as amended herein, is directed to a fibrous nonwoven comprising at least one short fiber-including layer, wherein at least a fraction of the short fibers is provided with a finish in an amount of more than 0.035 percent by weight, based on the fiber weight of the short fibers provided with the finish. The finish is selected from the group consisting of imidazolium ethosulfates, methosulfates, and the ethoxylated and propoxylated derivatives of imidazolium ethosulfates and

methosulfates, wherein the short fibers have a moisture content in the range of from 4 to 16%.

Claim 36, as amended herein, is directed to a short fiber provided with a finish in an amount of more than 0.035 percent by weight, based on the fiber weight, wherein the finish is selected from the group consisting of imidazolium ethosulfates, methosulfates, and the ethoxylated and propoxylated derivatives of imidazolium ethosulfates and methosulfates, and wherein the short fiber has a multi-limbed cross-section and a moisture content in the range of from 4 to 16%.

Whitfield et al. is directed to a composition for addition to cellulosic fibers prior to felting them into a sheet comprising as component (a) a monomeric water soluble diallyl dimethyl ammonium halide or homopolymer thereof or mixtures thereof and as component (b) a water dispersible complex fatty amido compound, specifically, 1-stearamidoethyl-1-methyl-2-heptadecyl imidazolinium methosulfate.<sup>1</sup> Whitfield et al. also discloses a dried cellulosic fiber tissue sheet containing an amount of the composition to enhance the softness of the dried sheet while increasing, or not substantially reducing, absorbency of water and tensile strength of the dried sheet as compared with a dried felted cellulosic tissue fiber sheet to which said composition has not been added.<sup>2</sup>

Agyapong et al. is directed to catamenial tampons having improved expansion characteristics, and thus, improved leakage protection.

Applicants reiterate and maintain as in Applicants' Amendment C and Response After RCE dated November 1, 2010, that

---

<sup>1</sup> Whitfield et al., the Abstract, claim 1, col. 3, ln 14-22, Example 1 and claim 9.

<sup>2</sup> Whitfield et al., the Abstract, claim 9, col. 3, ln 14-22, Examples II-IV and VI.

while Agyapong et al. teaches that rayon fibers and trilobal rayon fibers can be used alone or in a mixture with short cotton fibers to form absorbent articles<sup>3</sup> and discloses absorbencies of from less than 6 g/g to up to about 15 g/g catamenial devices,<sup>4</sup> there is simply no reason to combine Agyapong et al. with Whitfield et al. to arrive at the instant invention of Applicants' claims 20 and 36. However, in order to advance the prosecution of the instant case, Applicants have amended claims 20 and 36 to require that the short fibers have a moisture content in the range of from 4 to 16%.

In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. § 2142 requires a clear articulation of the reasons why the claimed invention would have been obvious. Specifically, to reject a claim based on this rationale, the Office must articulate the following: (1) a finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings to arrive at each and every limitation of the claimed invention; (2) a finding that there was reasonable expectation of success; and (3) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness. The Office has failed to meet its burden under number (1) above, as the cited references, alone or in combination, fail to teach or suggest each and every limitation of Applicants' claimed invention, and further, there is no apparent reason for one skilled in the art to modify and/or combine the references to arrive at each and every

---

<sup>3</sup> Agyapong, et al., col. 7, ln 6-11.

<sup>4</sup> Id., col. 3, ln 44-46, col. 11, ln 12-16.

limitation. It simply would not have been obvious to one skilled in the art to arrive at Applicants' claimed combinations.

Significantly, Whitfield et al., in view of Agyapong et al., fails to teach or suggest **a short fiber having a moisture content in the range of from 4 to 16%**. This is a significant aspect of Applicants' amended claims 20 and 36.

Specifically, as disclosed in the instant specification, (as published as US 2007/0266503 A1) the short fibers deployed to generate the results of Table 1 were short fibers having a moisture content in the range of from 4 to 16%. The inventors have found that the moisture content of the short fibers used in the airlaid process has an influence on the throughput rate. (see paragraph [0018]). Particularly, short fibers having a moisture content in the range of from 4 to 16% allow for the production of fibrous nonwovens using an improved throughput rate, allowing for a more efficient, cost-conscious production of nonwovens. (see paragraph [0005]).

Whitfield et al. never even mentions moisture content. Further, while Agyapong et al. discloses that, in particularly preferred embodiments, the plegget 28 is subject to microwave conditioning during tampon formation and that this step is believed to heat water within the fibers of the plegget, thereby allowing greater flexibility in the compression step<sup>5</sup> there is no mention of using a short fiber having a moisture content in the range of from 4 to 16%, as is required in Applicants' amended claims 20 and 36.

As there is no teaching or suggestion of a short fiber having a moisture content in the range of from 4 to 16%, and further, as there is no reason or motivation to modify/combine

---

<sup>5</sup> Agyapong et al., col. 12, ln 59-64.

Whitfield et al. and Agyapong et al., amended claims 20 and 36 are patentable over Whitfield et al. in view of Agyapong et al.

B. Claims 20-26, 29-33, 35-39, 41-45

Reconsideration is requested of the rejection of claims 20-26, 29-33, 35-39 and 41-45 under 35 U.S.C. 103(a) as being unpatentable over Scott, Jr. et al. (U.S. Patent Application publication 2002/0032421) in view of Whitfield et al. (U.S. Patent No. 4,432,834), Agyapong et al. (U.S. Patent No. 6,554,814), and Shah et al. (U.S. Patent No. 4,575,376).

Claim 20, as amended, is discussed above. The Whitfield et al. and Agyapong et al. references are discussed above. As discussed above, Whitfield et al. and Agyapong et al. do not teach or suggest a fibrous nonwoven comprising at least one short fiber-including layer, wherein the short fibers have a moisture content in the range of from 4 to 16% as is required in Applicants' amended claims 20 and 36. Scott, Jr. et al. and Shah et al. fail to overcome the shortcomings of Whitfield et al. and Agyapong et al.

Scott, Jr. et al. is directed to an absorbent airlaid nonwoven fabric comprising short fibers, composed of cotton or rayon, that may be bonded together using a binder of thermoplastic fibers. (See Scott, Jr. et al. at page 2, paragraph [0014] and page 3, paragraph [0025]). The short fibers have a length of 0.5-12 mm. (See Scott, Jr. et al. at page 3, paragraph [0025]). In one embodiment, the airlaid fabric may further include superabsorbent materials. (See Scott, Jr. et al. at page 3, paragraph [0029]).

Shah et al. disclose a process for increasing the absorbency of cellulosic fibers by a high temperature wet treatment comprising heating the fibers in a water bath at

temperatures within the range of about 95<sup>0</sup>C to 100<sup>0</sup>C for periods ranging from about one to sixty minutes. Shah et al. is further directed to a method for increasing the absorbency of cellulosic fibers by treating said fibers with a finishing agent such as polyoxylethylene sorbitan monoesters of a higher fatty acid. (See Shah et al. at col. 3, lines 33-55).

While Scott, Jr. et al. discloses that water may be added to the web if necessary to maintain specified or desired moisture content to minimize dusting and to reduce the buildup of static electricity,<sup>6</sup> there is no disclosure of a short fiber having a moisture content in the range of from 4 to 16%, as is required in Applicants' amended claims 20 and 36. Further, while Scott, Jr. et al. discloses a preferred embodiment wherein their invention provides **a tampon** including 1-10% **finished product** moisture content,<sup>7</sup> nowhere is there any mention that the short fibers used in the tampon include a moisture content of 4 to 16%. As it is generally known in the art that a tampon comprises more than just an absorbent web of short fibers, such as for example, an interfiber binder, and as particularly disclosed in Scott, Jr. et al., 10-40% binder fiber<sup>8</sup>, one of ordinary skill in the art at the time of the instant invention, would have had no reason or motivation to assume that the tampon of Scott, Jr. et al., including 10% Celbond Type 255 (bicomponent fiber with a polyether core and a copolyolefin sheath) with 1-10% finished product moisture content,<sup>9</sup> is the same as or equivalent to the absorbent short fibers of the tampon have a 1-10% moisture content.

---

<sup>6</sup> Scott et al., paragraph [0011].

<sup>7</sup> Scott et al., paragraph [0045].

<sup>8</sup> Scott et al., paragraph [0028] and claims 17 and 20-22.

<sup>9</sup> Scott et al., paragraph [0045].

Moreover, at best, Shah et al. discloses a tampon including 11% moisture when dry weight calculated.<sup>10</sup> There is no disclosure or suggestion, however, of the tampon including short fibers having a moisture content in the range of from 4 to 16% as is required in Applicants' amended claims 20 and 36.

Based on the foregoing, Applicants respectfully submit that the cited references fail to teach or suggest each and every element of Applicants' claims 20 and 36, and further, there is no reason to modify/combine reference teachings to arrive at each and every element.

In view of the foregoing, claims 20 and 36 are patentable over the cited references. Additionally, claims 21-26, 29-33, 35-37, 39 and 41-45 depend either directly or indirectly from amended claims 20 and 36, and as such, are patentable over the cited references for the same reasons as set forth above for claims 20 and 36, as well as for the additional limitations they require.

---

<sup>10</sup> Shah et al., Table 3.

**CONCLUSION**

In view of the foregoing amendments and remarks, all the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action with respect to all the pending claims is respectfully solicited.

The Commissioner is hereby authorized to charge any fees that may be required in connection with this Amendment D and Response to Office Action to Deposit Account No. 01-2384.

Respectfully Submitted,

/Christopher M. Goff/

Christopher M. Goff, Reg. No. 41,785  
ARMSTRONG TEASDALE LLP  
7700 Forsyth Blvd., Suite 1800  
St. Louis, MO 63105  
314-621-5070

CMG/JMB/HVD/ew  
Via EFS